

<b>Study program:</b>	Civil Engineering		
<b>Level of study:</b>	Undergraduate academic studies		
<b>Course title:</b>	<b>Stability of in-line structures</b>		
<b>Teacher:</b>	<b>Vojnic Purcar Martina</b>		
<b>Course Status:</b>	Compulsory		
<b>Credits (ECTS):</b>			
<b>Prerequisite:</b>	-		
<b>Course objective(s):</b>	Through this course, students are introduced to methods of calculation influences at in-line structures according to the II order theory, and the calculation methods of the critical loads that leads to loss of stability of structures.		
<b>Course outcome(s):</b>	The realization of the planned scopes.		
<b>Course Content:</b>			
1 <sup>st</sup> week	<b>The II order theory.</b> Opening remarks. The theory of large deformations. The theory of II order. Linearized theory of II order.		
2 <sup>nd</sup> week	The theory of II order of plane rod with constant cross section and a constant axial force.		
3 <sup>rd</sup> week	The method of initial parameters.		
4 <sup>th</sup> week	The method of transfer matrices.		
5 <sup>th</sup> week	Integro-differential method.		
6 <sup>th</sup> week	First test		
7 <sup>th</sup> week	Applying deformation method for calculation system of beams using II order theory – part 1.		
8 <sup>th</sup> week	Applying deformation method for calculation system of beams using II order theory – part 2.		
9 <sup>th</sup> week	Applying finite element method for calculation system of beams using II order theory		
10 <sup>th</sup> week	Second test.		
11 <sup>th</sup> week	<b>Stability of structures.</b> Opening remarks. Static methods at analysis of stability of structures.		
12 <sup>th</sup> week	The method of initial parameters, the method of transfer matrices, integro-differential method.		
13 <sup>th</sup> week	Applying deformation method at analysis of stability in-line structures.		
14 <sup>th</sup> week	Applying finite element method at analysis of stability in-line structures.		
15 <sup>th</sup> week	Third test.		
<b>Literature:</b>			
M. Djuric: Stabilnost i dinamika konstrukcija, Građevinski fakultet, Beograd, 1977.			
M. Sekulovic: Teorija linijskih nosača, Građevinska knjiga, Beograd 2005.			
<b>Number of hours:</b>			Other classes: 0
Lectures: 0	Exercises: 0	Other forms of teaching: 0	Individual research work: 0
<b>Teaching methods:</b> Lectures, exercises, seminars, consultations			
<b>Evaluation of knowledge (maximum 100 points)</b>			
<b>Pre-exam activities</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
Activity during the lectures	<b>10</b>	Written exam	<b>20</b>
Activity during the exercises	<b>10</b>	Oral exam	<b>15</b>
Seminar paper (Graphic work, Term paper...)	-	-	-
Colloquia	<b>45</b>		